DOCUMENT RESUME

ED 338 019 FL 019 534

AUTHOR Jordens, Peter
TITLE Linguistics and Second Language Acquisition.
PUB DATE 90
NOTE 30p.; In: "Balance & Perspectives: 25 Years of Dutch Applied Linguistics" (see FL 019 532).
PUB TYPE Journal Articles (080)
JOURNAL CIT Toegepaste Taalwetenschap in Artikelen (Applied Linguistics in Articles); n36 p16-44 1990

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Applied Linguistics; *Contrastive Linguistics; Foreign Countries; Grammar; *Interlanguage; *Language Research; *Language Universals; Linguistic Theory; Second Language Learning; *Second Languages
IDENTIFIERS *Markedness

ABSTRACT

The first contacts between linguistics and second language acquisition date from the period of contrastive analysis of languages, in the late 1960s and early 1970s. When contrastive analysis failed as an explanatory model, linguists lost interest in second language research and descriptive/contrastive studies declined, resulting in a changed research paradigm. Introduction of the term "interlanguage" marks the recognition of utterances of the second language learner as reflecting an underlying coherent language system. Two important aspects of interlanguage include: (1) markedness relations within the language system are relevant to language learning processes; and (2) a language system consists of different modules that interact during the language production process. However, these theories explain only certain phenomena within a complex system determining language behavior and language development of second language learners. The principle of universal grammar, which works from the assumption of an innate capacity for native language learning, offers a more useful framework for examining second language learning. Universal grammar research suggests that the linguistic relationship defined with this approach can account for phenomena such as coherence and order of acquisition in second language learning. A 66-item bibliography is included. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

5

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J F M ATTER

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED 380 019

LINGUISTICS AND SECOND LANGUAGE ACQUISITION

Peter Jordens
Applied Linguistics
Free University of Amsterdam
De Boelelaan 1105
1081 HV Amsterdam

1. *Introduction*

Applied Linguistics is the discipline which concerns itself with the processes involved in foreign and second language learning. The term Applied Linguistics suggests that there is a special relationship between foreign and second language learning on the one hand, and linguistics on the other. Within the area of second language acquisition research, however, this relationship is interpreted differently by two types of researchers. On the one hand, there is the linguist who is searching for empirical evidence to show whether a theoretical linguistic model can be retained or needs to be adjusted. Above all the linguist's concern is to test for theoretical alternatives. On the other hand, there is the more psycholinguistically oriented researcher of second language learning who is interested in the reality of processes involved in language acquisition and language development. He may ask himself to what extent linguistic theories can make a contribution to a better insight into phenomena of acquisition and development.

2. *Contrastive analysis*

The first contacts between linguistics and second language acquisition date from the days of contrastive analysis (CA). The Projekt fur Angewandte Kontrastive Sprachwissenschaft (PAKS) (Project on Applied Contrastive Linguistics) is one example. This project was started in Kiel 1968 and was later continued in Stuttgart (e.g. Nickel 1970a, 1970b; Rohdenburg 1974). The aim of this project was to make a systematic comparison between English and German and to work out the principles upon which contrastive linguistic analysis should be based. Further research was envisaged in order to find possibilities for practical application to the teaching of foreign languages at different educational levels, the field of error analysis, language testing and sequencing of foreign

PLO 455

BEST COPY AVAILABLE

language course materials (PAKS-Arbeitsbericht Nr 5,iii). It was when linguistics, in this case descriptive-contrastive linguistics, failed to provide a clear explanation for the occurrence of errors, that interest in contrastive analysis dwindled. It appeared that differences between languages did not always lead to errors and that errors could not always be attributed to the fact that there were differences between languages. Contrastive analysis could not offer a contribution to applied linguistic research into second language acquisition.

When contrastive analysis failed as an explanatory model, linguists lost interest in second language research and linguistic descriptive-contrastive studies were carried out less frequently. This development resulted in a change in the research paradigm. Research aimed at predicting errors made by second language learners on the basis of a theoretical linguistic comparison of two language systems had to make way for research with an empirical and psycholinguistic orientation towards the processes involved in language acquisition and language development.

3. *Interlanguage as a system*

The introduction of the term *interlanguage* primarily marks the moment when the utterances of the second language learner came to be regarded as reflecting an underlying coherent language system. The assumption is that interlanguage systems can be compared with natural language systems, acquired as mother tongues. The introduction of the term marks the moment when research into second language acquisition came to mean research into the language *behaviour* of second language learners and into the *processes* associated with their linguistic *development*. The utterances of the second language learners were seen against the background of an underlying language system without there being a direct relationship between this language system and actual second-language behaviour

There are two aspects of the interlanguage, when regarded as a language system, which clearly stand out. The first aspect is that markedness relations within the language system are relevant to the processes involved in language acquisition. The fact that a language system consists of different modules which interact during the language production process, constitutes the second aspect.

3.1. *Markedness theory*

Ever since the days of contrastive analysis second language researchers have been confronted with the problem that differences between languages do not always lead to difficulties. Zobl (1980a, b) has discovered, for example, that the position of pronouns causes problems for English learners of French but not for French learners of English. It appears that English learners produce incorrect French sentences in

which they place the pronouns after the verb, as they would in English. Examples of this are the sentences in (1):

(1) * Je vois elle
* Le chien a mangé les
* Il veut les encore
* Oui, j'aime le
* Il pense qu'elle a oublié moi aussi.

The reverse is not true, however, for French learners of English; they never make the mistake of placing pronouns before the verb as would be the case in French (c.f. Zobl 1980a, 52ff., 1980b, 13f.):

"Although I have been studying the acquisition of English by Francophones for a number of years, I have yet to find one instance of the transfer of the clitic pronoun placement rule. (..) the situation is very different for the direction English L1-French L2. (..) English children after five-and-a-half years of French immersion either avoided preverbal clitics or reproduced the postverbal position of object pronouns in English." (Zobl 1980b, 13f.)

It is the theory of markedness which could provide an explanation for these differences.

Markedness theory specifies a relation between marked and unmarked alternatives. The question is how to identify what is marked and what is unmarked. In general, it seems to be the case that whenever there are two options within a system and one of them has a special status where the other does not, it is the option with the special status which is the marked one. The following example will illustrate this point.

It is the use of the verb 'to serve' with an indirect object or a direct object which is of interest here. Given the context in which this verb is used (see picture two: "I'm sorry, we only serve gentlemen"), the most obvious unmarked interpretation is the one where 'gentlemen' is seen as the indirect object. The actual situation, however, is that the ladies regard 'gentlemen' as direct object (see picture three: "Good. We'll have two then"), which is the marked interpretation in this situation.

In French, clitic pronouns have marked status, while the English pronouns such as *me, him* and *them* are unmarked. This difference in markedness results from the fact that clitic pronouns are bound morphemes in French, while pronouns in English are free morphemes.

For every unmarked nominal variant English only has an unmarked pronominal variant .

Table 1: Nouns and pronouns in French and English

Nominal:	Pronominal:
Je vois *l'homme*	Je *le* vois
I see *the man*	I see *him*

Linguistic markedness relations have certain consequences for second-language behaviour. Firstly, it seems that in the second language, marked structures are more difficult to learn than unmarked ones. This explains why English learners make so many errors of the type shown in (1). Secondly, it seems that a construction which has marked status in the first language is not so readily transferred or, indeed, not transferred at all. That explains why French learners of English never make errors of the type * *I him see*.

Eckman (1977) has devised a term for the fact that problems exist in one direction and not in the other whenever there are differences between languages; he has called this phenomenon the "directionality of difficulty". He has accounted for this in terms of what he calls the Markedness Differential Hypothesis (MDH, Eckman 1977, 1985). This hypothesis holds that it is those parts of the target language which differ from the first language and have marked status that are most difficult to learn. Eckman refers to the distribution of voiceless and voiced obstruents in English and German as an example. In English there is a contrast between voiced and voiceless obstruents in initial, medial and final position, while in German this is only the case in initial and medial position.

Table 2: Voiceless and voiced obstruents in German and English

	English			German		
initial:	[p]/[b]:	[t]/[d]:	[k]/[g]:	[p]/[b]:	[t]/[d]:	[k]/[g]:
	pear	*tear*	*cold*	*Paar*	*tanken*	*klauben*
	bear	*dear*	*gold*	*bar*	*danken*	*glauben*
medial:	[p]/[b]:	[t]/[d]:	[k]/[g]:	[p]/[b]:	[t]/[d]:	[k]/[g]:
	floppy	*bitter*	*buckle*	*fiepen*	*raten*	*pauken*
	snobby	*bidder*	*bugger*	*lieben*	*Räder*	*saugen*
final:	[p]/[b]:	[t]/[d]:	[k]/[g]:	[p]:	[t]:	[k]:
				(Auslautverhartung)		
	rip	*kit*	*back*	*fiept*	*Rat*	*paukt*
	rib	*kid*	*bag*	*liebt*	*Rad*	*saugt*

The difference between German and English can be described in terms of the "Terminal Devoicing" rule (German "Auslautverhartung"). If it were the case that English learners had to learn this rule for German, it would be more difficult for them to learn the correct German pronunciation than vice versa. This is not the case, however. On the contrary, for Germans it appears to be difficult to learn the English voiced/unvoiced contrast in final position. Eckman explains this by means of markedness relations. From the point of view of language typology there seems to be an implicational relationship between the different positions in which the voiced/voiceless contrast can occur. If a contrast occurs in medial position in a particular language, it also occurs in initial position but not necessarily in final position. Whenever the contrast occurs in end position, it definitely also occurs in medial and initial positions. And, finally, if it occurs in initial position, this does not necessarily imply a contrast in medial or final position. See the Voice Contrast Hierarchy according to Eckman (1977, 322).

From the point of view of language typology, then, it is the contrast in final position which is least common, most marked and more difficult to learn according to the MDH. This explains why German learners of English find it difficult to pronounce correctly words like *rib, kid* and *bag* besideswords like *rip, kit* and *back*, while English learners of German do not find it difficult to pronounce correctly words with Terminal Devoicing such as *liebt, Tag* and *Rad* in addition to *lieben, Räder* and *Tage*.

Table 3: Voice Contrast Hierarchy

Initially	Least marked
⏐	⏐
Medially	⏐
⏐	⏐
Finally	Most marked

From the point of view of language typology, then, it is the contrast in final position which is least common, most marked and more difficult to learn according to the MDH. This explains why German learners of English find it difficult to pronounce correctly words like *rib, kid* and *bag* besides words like *rip, kit* and *back*, while English learners of German do not find it difficult to pronounce correctly words with Terminal Devoicing such as *liebt, Tag* and *Rad* in addition to *lieben, Räder* and *Tage*.

Markedness relations also play a role in the acquisition of lexical meaning (cf. Jordens & Kellerman 1981, Kellerman 1978). Transfer of a word with a marked meaning is less likely to occur than transfer of a word with an unmarked meaning. Furthermore, it seems that when a word is polysemous in the first language, it is less likely to be used in the second language to express a particular meaning which is not the

prototypical one. This explains why Dutch learners will not always express all the senses of a word like *breken* ('to break') by using the English word *break*. The literal sense (*He broke his leg*) poses no problems, but as the sense of the word *breken* broadens (e.g. *z'n woord breken* 'to break one's word'; *een record breken* 'to break a record'), learners will have difficulty in accepting that the metaphorical senses of the Dutch *breken* can also be expressed in English by the word *break*:

Table 4: Semantic markedness (Jordens & Kellerman 1981; Kellerman 1978)

He broke his leg
She broke his heart
The waves broke on the rocks
He broke his word
She broke the world record
Which country has broken the ceasefire?

From the nature of the research referred to here we can conclude that the question is not whether we can find evidence to validate markedness theory or not. In applied linguistic research markedness theory is used to explain certain phenomena of language behaviour. Using this theory, one can answer the questions why some structures in the target language lead to learning problems and others do not, and why some structures are learned before others. Furthermore, it appears that this theory can also adequately specify the conditions under which transfer from the first language occurs.

3.2 The modular structure of the interlanguage system

Subparts of linguistic systems, i.e. the syntactic, phonological and semantic system of a language, do not function independently; this is not only true for native speakers but also for second language learners. The subparts or modules interact, and languages differ with respect to the way in which this interaction takes place. The principles which determine word order in languages may be used to illustrate this. In some languages there is a relationship between word order and syntactic function, while in other languages it is the relationship between word order and discourse function which is more important. A typological distinction can be made between languages which could be characterized as "subject-prominent" or "topic-prominent" (cf. Li & Thompson 1976). It seems that certain problems facing the learner have to do with the way in which modules interact within the linguistic system.

Research carried out by Schachter & Rutherford (1979) and Rutherford (1983) seems to indicate that Chinese, Japanese and Korean learners of English initially interpret English sentences in terms of the discourse-functional relationships in their mother tongue. As a result, word order is not determined by the relationship between the subject and the

predicate but by the topic-comment relationship. Sentences in (2) are typical for Chinese learners of English;

(2) *Most of food which is served in such restaurant have cooked already.
*Irrational emotions are bad but rational emotions must use for judging.
*Chiang's food must make in the kitchen of the restaurant but Marty's food could make in his house.
*If I have finished these four jobs, I am confident that my company can list in the biggest 100 companies in the world.
(Schachter & Rutherford 1979, 7ff.)

These sentences should not be seen as an attempt to produce passive sentences, as in (3), but as a result of an interaction between the discourse-functional topic-comment structure of the mother tongue and the syntactic structure of English, as in (4):

(3) Most of the food which is served in such restaurants has been cooked already.

(4) Most of the food which is served in such restaurants [they] have cooked [it] already.
(Schachter & Rutherford 1978, 8)

What is important for the second language acquisition process is that these learners discover that English sentence structure is based not so much on the topic-comment as on the subject-predicate relationship.

The problem which Chinese learners of English face is that they assume in the initial stages that the first language and the target language are identical with respect to the relevance of topic-comment relations for word order. Presumably because they have become sensitive to the fact that the topic-comment relationship plays a role in English as well, these learners transfer the topic-comment structure from the mother tongue into English. However, there is a difference in the way in which the topic-comment relationship interacts with the syntactic structure of the sentence in the mother tongue and the syntactic structure of the sentence in the target language.

Interaction between different modules in a language system is not only of importance when languages differ. All utterances in the mother tongue as well as the language being learned are the result of complex interactions between underlying conceptual structures, discourse functions and grammatical relationships. One example of this is the case system in German. Assigning case is not purely a question of syntax. Case marking is related to the discourse-functional role of the nominal constituent. This is why we are able to assign case when we have little idea (yet) of what the syntactic function of a nominal constituent is. This is true for sentences such as headlines in newspapers which do not have

a finite verb (5), or whenever during the language production process a finite verb has to be chosen at a much later stage in the sentence (6):

(5a) past-participle phrases:

Der Schütze getötet
the shooter (NOM) killed
'The shooter killed'

Neu*er* Bischof für Berlin ernannt
new bishop (NOM) for Berlin appointed
'New bishop for Berlin appointed'

Den Vater verteidigt, die Mutter vergöttert
the father (ACC) defended, the mother worshipped
'His father defended, his mother worshipped'

Den Traum vom Aufstieg ausgeträumt
the dream (ACC) of promotion dreamed to an end
'The dream of promotion dreamed to an end'

(5b) verbless NPs:

Der Hamburger SV fest im Griff von Hadjuk Split
the Hamburg SV (NOM) firmly in-the grip of Hajduk Split
'The Hamburg SV firmly in-the grip of Hajduk Split'

Den Hamburger SV fest im Griff
the Hamburg SV (ACC) firmly in-the grip
'The Hamburg SV firmly in the grip'

Den Sieg in der Tasche
the victory (ACC) in the pocket
'The victory in the pocket'

Den Finger am Abzug
the finger (ACC) on-the trigger
'the finger on the trigger'

(6) Noch später sehen wir, wie in Amerika reiche Industrielle, Ölmagnaten und Bankiers *einen* Teil der kapitalen Summen, die sie ansammeln konnten, als die Weise der Versteuerung sie daran noch nicht hinderte, Fonds *anvertrauten*, deren Ziel.....
'Much later we see how in America rich magnates, oil tycoons and bankers (SUBJ) part of the capital sums (OBJ) that they could gather when the means of tax declaration did not prevent them, entrusted (FINITE VERB) to funds of which goals ...'

In these cases the syntactic function of the nominal constituent is still undetermined at the time when a particular case has to be chosen. Case marking can only take place by taking the underlying conceptual structure into account (cf. Jordens 1983, 150ff., 199ff.).

Whenever the grammatical form deviates from the underlying conceptual relationships problems arise for learners of German, precisely because there is no 1:1 relationship between underlying conceptual relationships, discourse functions and grammatical form. It would seem that in (7) and (8), for example, a nominative or accusative was used incorrectly because the speaker assigned case based on the underlying conceptual relationships:

(7) * *Die* Grünen *(NOM) werden vorgeworfen ,daß ....
= Den Grünen (IO:DAT) wird vorgeworfen, daß ....
The Greens are blamed, that .....
'The Greens are blamed, that ....'

* *Der* Linksaußen (*NOM) gelang ein herrliches Tor
= Dem Linksaußen (IO: DAT) gelang ein herrliches Tor
The left winger succeeded a magnificent goal
'The left-winger succeeded in scoring a magnificent goal'

(8) * Es wurde *einen* Fall (*ACC) erwähnt
= Es wurde ein Fall (NOM) erwähnt
There was a case mentioned
'A case was mentioned'

* Für die zweite Variante läßt sich *einen* ähnlich*en* Vergleich (*ACC) aufstellen
= Für die zweite Variante läßt sich *ein* ähnlich*er* Vergleich (NOM) aufstellen
For the second variant lets itself a similar comparison made
'A similar comparison can be made for the second variant'

* Dadurch entsteht *einen* Knall (*ACC)
= Dadurch entsteht *ein* Knall (NOM)
Thereby is-caused a bang
'This caused a bang'

* *Den* Sieg (*ACC) ist mir entgangen
= *Der* Sieg (NOM) ist mir entgangen
The victory is me escaped
'The victory escaped me'

* *Den* Film (*ACC) hat mir gefallen
= *Der* Film (NOM) hat mir gefallen
The movie has me pleased
'The movie was nice'/'I liked the movie'

* *Seinen* Wagen (*ACC) ist kaputt
= *Sein* Wagen (NOM) ist kaputt
His car is broken down
'His car broke down'

These errors are not only typical of Dutch speakers of German as a foreign language. Germans make these errors in their *own* language as well (cf. Jordens 1986).

In Dutch we observe the same phenomenon. In cases where a nominal constituent would at first glance be assigned the function of subject (based on the underlying conceptual relationships) but gets for grammatical reasons the dative case, the incorrect nominative case is often used:

(9) * Ik heb het sterke vermoeden dat *de journalisten* (IO: plural) *zijn* (fV: *plural) ingefluisterd dat ...
= ... dat *de journalisten* (IO: plural) *is* (fV: singular) ingefluisterd dat ...
I have the strong suspicion that the journalists **have/has* been whispered to that ...
'I have the strong suspicion that the journalists were secretly informed that ...'

* *Deze mensen* (IO: plural) *worden* (fV: *plural) een stuk objectiviteit (SUBJ: singular) aangemeten
= *Deze mensen* (IO: plural) *wordt* (fV: singular) een stuk objectiviteit (SUBJ: singular) aangemeten
These people **have/has* been a degree of objectivity ascribed to
'A degree of objectivity has been ascribed to these people'

When a constituent has the function of subject for purely grammatical reasons, it is often hard to identify it as the subject of a sentence. Consequently, there is no agreement between the finite verb and the grammatical subject. Examples are given in (10):

(10) * Er *wordt* (fV: *singular) al enige tijd *proeven* (SUBJ: plural) genomen om de eenvoudige aanslagen administratief af te doen
= Er *worden* (fV: plural) al enige tijd *proeven* (SUBJ: plural) genomen om de eenvoudige aanslagen administratief af te doen
There is already for-some time experiments done in-order the simple assessments administratively to settle
'For some time experiments have been carried out in order to settle the simple assessments administratively'

* In Southampton *speelde* (fV: *singular) zich *soortgelijke taferelen* (SUBJ: plural) af als vorig jaar in Rotterdam

= In Southampton *speelden* (fV: plural) zich *soortgelijke taferelen* (SUBJ: plural) af als vorig jaar in Rotterdam
In Southampton took-place similar events as last year in Rotterdam
'Events took place in Southampton which were similar to those which occurred in Rotterdam last year'

3.3 *Conclusion*

In conclusion we may state that while second language research may have started as a means to provide evidence in support of hypotheses set up by linguists, it has developed into a discipline in which linguistic theories are used only to explain *certain* phenomena within a complex system that determines the language behaviour and the language development of second language learners.

4 *UG and second language acquisition*

With regard to the relationship between linguistics and research into second language acquisition, we are at present in a situation which is similar to the one at the time when contrastive analysis was still popular. As a result of research into first language acquisition linguists have become interested in the processes involved in second language acquisition. This is the case with research carried out within the framework provided by Chomsky's Universal Grammar. If we assume that children have at their disposal an innate capacity for language when learning their mother tongue, then a relevant question would be whether adults still have this same capacity when learning a second language. If it could be shown that learners, when constructing inter-language hypotheses, are led by 'constraints' considered by linguists to be universal, then this would provide evidence for this capacity being operative.

4.1 *Innate constraints*

The fact that many conceivable rules do not occur in languages is used as an argument to demonstrate that children have some kind of innate knowledge about grammar.

Well-known in this respect is Chomsky's example to illustrate the innateness of the principle of structure dependence. If first language learning were based on *inductive principles*, one should expect that children who are confronted with sentences such as (11a, b) and (12a, b) would also construct sentence pairs such as (13a, b):

(11a) The man is tall
(11b) Is the man tall?

(12a) The book is on the table
(12b) Is the book on the table?
(13a) The man who is tall is in the room
(13b) *Is the man who tall is in the room?

Their assumption should be that to form an interrogative the first is should be moved forward. The fact is, however, that children never make errors of this kind. They always produce correct sentence pairs as in (14a, b):

(14a) The man who is tall is in the room
(14b) Is the man who is tall in the room?

Sentences which are in conflict with the structure dependence of grammatical relationships do not occur, not even if someone were to hear sentences of type (11) and (12) all his life. This is reason enough for Chomsky (1975) and White (1981, 242ff.) to assume that structure dependence is an innate principle which ensures beforehand that children do not test all possible hypotheses:

> "The only reasonable conclusion is that UG contains the principle that all such rules must be structure-dependent. That is, the child's mind (...) contains the instruction: construct a structure-dependent rule, ignoring all structure-independent rules. The principle of structure dependence is not learned, but forms part of the conditions for language learning." (Chomsky 1975, 32ff.)

Basing themselves on the principle of structure dependence, children know that to form the interrogative, the finite verb in the *matrix sentence* must be moved to the front.

It is not difficult to think of more examples like this. One could ask, for example, why it is that children know when to leave out verbs and when not to leave them out. See (15) and (16):

(15) J. denkt dat dit de voorkant *is* en dit de achterkant 0.
J. thinks that this the front is and this the back 0
'J. thinks that this is the front and this 0 the back'

(16) (De pop heeft een paar nieuwe schoentjes gekregen) Als ze deze niet aan *mag mag ze* die aan.
(the doll has a new pair of shoes) if she these not on can can she those on
'If she cannot have these on, she can have those on'
(Jasmijn 11-9-89).

Here too structure dependence is at stake.

Klein (1989) has recently shown that we need not resort to innate knowledge of the structure of language in these cases. According to him

it is essential that language acquisition processes should change through time and that it is in this way that linguistic knowledge is extended. New knowledge is added to existing knowledge. Initially, children learn simple sentences, as in (11) and (12). As a consequence they are able to deduce how to form interrogative sentences. At a later stage they will extend this knowledge based on what they already know. A child will learn, for example, that NPs can be made more complex; that is to say, they can be substituted by more elaborate constituents without changing the structure of the original sentence. The finite verb which is part of a constituent embedded in the original sentence has a different status, therefore, than the finite verb in the matrix sentence. Klein notes that it is essential for the acquisition of these structure-dependent principles that the acquisition process should progress accumulatively. I do not agree with this. For it would imply that learners of a second language, under certain circumstances, could overlook these principles in the second language. It is essential for the acquisition of structure dependence that children should discover that certain parts of the sentence (constituents) can be replaced by others. This possibility of replacing constituents ensures that the principle of structure dependence can be learned inductively.

So, what about second language acquisition? The learner's interlanguage system is an interesting area of research because we cannot simply start off by assuming that the principles on which interlanguages and natural languages are based are the same. Interesting interlanguage structures are those which do not occur in the mother tongue or the target language. The question is whether learners make use of interlanguage rules which do not occur in natural languages. It is very difficult to find structures which are not based on either the first or second language. Nevertheless Clahsen is of the opinion that interlanguage systems are not natural language systems:

> "Adults develop systems when learning a second language which cannot be described as possible grammars in terms of UG principles. (..) the learning mechanisms which specialize in grammar acquisition are no longer available to adults learning a second language." (Clahsen 1988, 143).

One example which I would like to look at in more detail is the way in which, according to Clahsen, the syntax of negation is acquired by learners of German. Data from the longitudinal ZISA study (Clahsen 1984) seem to indicate that speakers of Romance languages go through three stages. In the first stage the interlanguage system is characterized by VO word order and the negative particle (*nein* or *nicht)* is placed before the verb:

Stage 1: *nich* sprechen Italien
not speak (Inf.) Italian
'He doesn't speak Italian'

ich *nee* sagen wieviel kilometer
I no say how many kilometres
'I don't know how many kilometres it is'

ich *nein* kauf
I no buy (Inf.)
'I haven't sold any cars'

In the second stage the negative particle is placed directly after the finite verb. Furthermore the non-finite verb is placed at the end of the sentence. So it would seem that second language learners have discovered that German has an underlying OV word order:

Stage 2: Ich will *nich* mit sie gewohnt
I want (1st sing.) not with they live (past part.)
'I don't want to live with them'

aber Stefan will *nich* diese lokal
but St. want not this pub
'But St. doesn't want this pub'

aber er hat *nich* diese papier
but he has not the paper
'But he hasn't got the papers'

wenn ich glaube, ich kann *nich* eine sache machen
if I believe I cannot one thing do (Inf.)
'If I believe that I can't do a thing'

In the third stage the finite verb and the negative particle may be separated by other constituents:

Stage 3: ich wollte mich *nich* bloßstellen
I wanted me not expose
'I didn't want to expose myself'

das hättest du mir *nich* sagen gebraucht
that have (2nd sing. subjunctive) you me not tell (Inf.) need (P.Part.)
'You needn't have told me'

According to Clahsen, it would seem that the acquisition of the position of NEG has something to do with the relationship between NEG and VP. The negative particle is placed before the VP in all stages (see Table 5); at stage 1 there is VO word order, at stage 2 there is OV word order and INFL is moved into second position in the sentence; at stage 3 it seems as

if the NPobj has been moved from the VP by what is referred to as 'scrambling':

Table 5: The relationship between NEG and VP in Romance learners of German

NEG VP[V...]
INFL NEG VP[..V] no scrambling
INFL NEG VP[..V] with scrambling

Clahsen says that if this development were to have taken place, then interlanguages at different stages would be in accordance with the principles of natural languages. Now Clahsen claims that the analysis in Table 5 is wrong for two reasons. First of all, he maintains that it is during stage 2 that SVO is still the predominant word order and that it is the use of OV word order which would trigger *scrambling*. Secondly, although it is the case that there is no scrambling in negated sentences (as in 17), there is scrambling in sentences with PPs at stage 2. At stage 3 this situation is different; scrambling does occur in negated sentences but not in sentences with PPs (see example 18).

(17) Stage 2:

ich kann *nich eine sache* machen (*no* 'scrambling')
I cannot one thing do (Inf.)
'I can't do a thing'

(18) Stage 3:

ich wollt *mich nich* bloßstellen (*with* 'scrambling')
I wanted me not expose
'I didn't want to expose myself'

ich soll *aus Italien eine apparat* bringen (*no* 'scrambling')
I am supposed from Italy a device bring (Inf.)
'I am supposed to bring a device from Italy'

Clahsen concludes that "within scrambling theory [there is] no possible grammatical analysis for the second language data" (143). The acquisition process can only be explained by means of "general learning strategies". For second language learners this amounts to the use of movement operations. Stage 2 precedes stage 3 because movement from an internal to an external position is easier than the other way around. At stage 2 this affects the position of the non-finite verb at the end of the sentence, at stage 3 this involves the position of the negation in the VP.

Unlike Clahsen, I think that it would be feasible to analyse interlanguage behaviour in terms of a natural interlanguage system. Clahsen

himself more or less suggests this when he notes that it is at stage 2 that SVO structure is still predominantly used. One might assume that before VO is re-structured and becomes OV there is a VO stage (stage 2 here) at which the non-finite part of the predicate (Vnf) is placed in final position. This is similar to the situation in English. English has underlying VO structure and places verb particles at the end of a sentence as in (19):

(19) He phoned the girl up

Given the assumption of underlying VO structure and particle movement, structures as in Table 6 are possible whenever NEG is placed after V.

Table 6: NEG at stage 2

V (NEG) O	
V (NEG) O Vnf	('particle movement')
V (NEG) O PP Vnf	('particle movement')

At stage 3 the underlying structure is reconstructed to an OV structure and NEG is placed before V. As a result, the structures in Table 7 are possible:

Table 7: NEG at stage 3

	O (NEG) V	
Vf	O (NEG) [e]	('verb-fronting')
PP	O (NEG) V	

One advantage of this analysis is that it is simple and psychologically more realistic. All structural differences between stage 2 and 3 can be accounted for and scrambling theory becomes redundant if one simply accepts that OV instead of VO has become the underlying word order and that NEG is not put directly after but before V. Both VO and OV order and NEG + V or V + NEG are in concordance with the possibilities within natural languages and are deducible on the basis of second-language input and by making use of existing knowledge about the first language. Hence, we do not have to assume the existence of particular learning strategies which are exclusively limited to second language acquisition.

Incorrect case marking by Dutch learners of German offers a nice and far less complicated example of a type of interlanguage utterance which is in conflict with the structure of natural languages. A typical error against the principle of structure dependence is evidenced in sentences such as (20):

(20) * Der Junge sagt, daß er und *seinen* Freund Käsebrot wollen

the boy says that he and his *(ACC) friend cheeseroll want
'The boy says that he and his friend want a cheeseroll'

* Der Vater weiß nicht, wann und wie *seinen* Sohn nach Frankfurt fahren soll
the father knows not, when and how his *(ACC) son to Frankfurt drive will
'The father doesn't know, when and how his son will drive to Frankfurt'

* Meine Erklärung, daß jedes Tier und *jeden* Mensch tot geht, konnte er nicht verstehen
my explanation, that every animal and every *(ACC) human being die will, could he not understand
'He couldn't understand my explanation, that every animal and every human being will die'

It is the interaction between underlying conceptual relationships and case marking in sentence structures which results in the incorrect assignment of case in these examples. In each of the examples there is a transitive relationship between a person in the matrix clause and a person or object in the subordinate clause. Based on the nature of this underlying relationship the NPs are marked morphologically by using a nominative and an accusative respectively. The fact that case marking is inextricably linked to relationships *within sentences* has apparently not been taken into account by the second language learners. The errors, however, are not in conflict with the structure of language. They are the result of an interaction between the conceptual and the grammatical system and acknowledge the modular character of the interlanguage.

A generally acceptable conclusion seems to be that a second language learner does nothing which does not conform to the rules which govern natural languages. Does this mean then that the second language learner has something like an innate capacity for learning a second language? As Klein (1989) has shown with regard to the acquisition of the principle of structure dependence, the fact that some conceivable rules do not show up does not prove that the second language learner has an innate capacity for learning a language. Principles of induction can account for the fact that some conceivable rules do not occur.

The fact that second language learners know things about language which they cannot have deduced from their native language or from the second-language input is another way of showing that interlanguage speakers have an innate capacity for learning a language. These considerations prompted experiments in which second language learners were asked to judge the grammaticality of sentences. Researchers had to ensure that possible effects could not be traced to knowledge of the first language. Hence pairs of correct and incorrect sentences were needed in which the distinction between grammatical and ungrammatical was based on a universal principle while the equivalents in the native

language should either be both grammatical or both ungrammatical. Researchers ensured that the second language learners had not previously been confronted with the chosen phenomena in their learning situation.

An example of such a case are constructions in which the so-called '*that-trace* effect' plays a role. The phenomenon which we are concerned with here is illustrated in *(21) and (22). In English *that* cannot be followed by a trace (= *e*). The Dutch variants of the grammatical and ungrammatical English sentences are both correct.

(21) * Who do you think that *e* saw Mary?
(22) What do you suppose that Mary will do *e* ?

In examples *(21) and (22) the empty slot from which *who* and *what* are extracted is indicated by means of *e*. In (21) '*e*' is in subject position while it is in object position in (22). These examples illustrate that in English, in these constructions extraction is only possible from the object position. In Dutch extraction is possible from the subject as well as the object position. See (23) and (24):

(23) Wie zei Mary dat *e* het glas gebroken heeft?
who said Mary that the glass broken has?
'Who said Mary broke the glass?'

(24) Wat denk je dat Mary zal doen *e* ?
what think you that Mary will do?
'What do you think Mary will do?

White (1989) claims that the difference between *(21) and (22) is founded on principles of UG and that Dutch is an exception to the rule in this respect. An experiment that White carried out on Dutch students learning English showed that sentences with object extraction (22) are often judged as more correct than sentences with subject extraction *(21). Subjects cannot have deduced this knowledge from their first language (cf. 23 and 24) and as it is highly unlikely that they somehow learned that constructions such as *(21) are ungrammatical in English, White assumes that it is the innate principles of Universal Grammar on which the intuitions of the subjects with respect to the difference in grammaticality are founded.

The conclusion that White draws from her experiment is somewhat premature, however. I would claim that the difference in grammaticality of sentences like *(21) and (22) is determined by the first language after all, despite the fact that the equivalent construction in the first language is incorrect in both cases. This can be demonstrated by means of sentence (25):

(25) Wie geloof je dat Karel roept?
who believe you that Charles calls?
'Who do you believe that Charles calls?'

This sentence is ambiguous in the sense that Karel can be assigned the function of subject or object; see (25a) and (25b):

(25a) Wie geloof je dat Karel roept *e*?
'Who do you believe that Charles calls?'

(25b) Wie geloof je dat *e* Karel roept?
'Who do you believe calls Charles?'

Although (25) is ambiguous it seems as though the interpretation in which *Karel* is subject and *wie* is the extracted object (as in 25a) is the most acceptable.

In order to determine whether Dutch speakers prefer object extraction in sentences of this type I carried out an experiment with 36 Dutch subjects. They were all second-year students of English. Subjects were asked to judge sentences of the type in table 8. There were 10 sentences of each type in the experiment. Subjects had to choose between *hij* (subject) or *hem* (object):

Table 8: Grammaticality judgements: % subject = hij. Subject as well as object extraction can occur in sentences 1 to 4. 5 and 6 are fillers.

1. Wie hoop je dat *hij/hem* benoemt?	87.5%
who hope you that he/him appoints	
'Who do you hope that he appoints'	
'Who do you hope appoints him?'	
2. Wie zeg je dat *hem/hij* zal bezoeken?	81.5%
who say you that him/he will see	
'Who do you say will see him?'	
'Who do you say that he will see?'	
3. Wie denk je dat *hij/hem* gezien heeft?	66.4%
who think you that he/him seen has	
'Who do you think that he saw?'	
'Who do you think saw him?'	
4. Wie verwacht je dat *hem/hij* een geschenk geeft?	66.4%
who expect you that him/he a present gives	
'Who do you expect is giving him a present?'	
'Who do you expect that he is giving a present to?'	
5. Wie is bezig **hij/hem* te fotograferen?	0,0%
who is busy he/him to photograph	
*'Who is busy taking a picture of he?'	
'Who is busy taking a picture of him?'	
6. Wat veronderstel je dat **hem/hij* leest?	99,2%
what assume you that him/he reads	
*'What do you assume reads him?'	
'What do you assume that he reads?'	

As is evident from the results in Table 8, subjects clearly prefer using the subject form *hij* in sentence types 1 to 4. This means that subjects

initially regard these sentences as cases of object extraction. Apparently, sentences with subject extraction are less likely to be regarded as grammatically correct in the mother tongue. If we assume that subjects make use of intuitions from their native language when judging the equivalents of these sentences in English, it may be expected that the equivalent of (23) is less likely to be accepted in English than (24). Hence, Dutch learners will reject a sentence like *(21) more often, for the simple reason that the Dutch equivalent for *(21) is regarded as less acceptable than the equivalent of (22).

The apparent difference in acceptability between sentences with subject extraction and object extraction is probably due to the way in which these sentences are processed. Sentences with object extraction seem to be processed more easily than sentences with subject extraction and the *relative* ease with which a grammaticality judgement is arrived at in the native language can be reflected in the degree to which equivalent structures in the second language are accepted as grammatical.

In an experiment by Felix (1989), constructions for which both native-language equivalents were grammatical were tested, as well as constructions for which both the native equivalents were *ungrammatical*. In a case like this one might think that second language learners who are able to distinguish between correct and incorrect in the second language cannot possibly have arrived at these judgements by basing themselves on their first language. Yet this is not true either; compare e.g. (26a) and (27a) with (26b) and (27b):

(26a) John was easy for Smith to persuade to come to the party
(27a) * John was easy for Smith to expect to come to the party

(27a) Who did the man see pictures of?
(27b) * Who did the man see John's pictures of?

The literal translation of both sentence pairs is incorrect not only in German but also in Dutch. Still, one variant seems to be worse than the other. Why? My impression is that the a-sentences call up associations with the *correct* constructions (cf. 28a and 29a), while a similar type of construction for the b-sentences is incorrect (cf. 28b and 29b):

(28a) Hans war leicht zu überzeugen (German)
Hans was makkelijk te overtuigen (Dutch)
Hans was easy to persuade
'John was easy to persuade'

(28b)* Hans war leicht zu erwarten (German)
*Hans was makkelijk te verwachten (Dutch)
Hans was easy to expect
'John was easy to expect'

(29a) Wessen Bilder hast du gesehen? (German)
Van wie heb je foto's gezien? (Dutch)
whose pictures have you seen?
'Whose pictures did you see?'

(29b) *Von wem hast du Hans' Bilder gesehen? (German)
* Van wie heb je Hans' foto's gezien? (Dutch)
from who have you John's pictures seen
'Who did you see John's pictures of?'

Here too, knowledge of the native language plays a role because second language learners who are asked to give a grammaticality judgement will use all the grammatical knowledge at their disposal. It seems naive to think that they would limit themselves to a literal first-language equivalent in this respect.

But suppose that second language learners are able to reject constructions without their native language providing any clue whatsoever in this respect? Would this then constitute evidence in support of the innateness of certain *constraints*? I do not think so. There appears to be a strategy (more advanced second language learners definitely use it) which says that things you have never come across before are incorrect. This is the well-known *Operating Principle*: "unknown, unloved".

Why have researchers like White and Felix become interested in these questions? What they wanted to know was whether second language learners were in some way limited when constructing second language hypotheses. This question initially arose as a result of linguistic interests: researchers looked for evidence of UG principles. It is my impression that linguists who are searching for empirical evidence in order to find out whether a theoretical linguistic model is tenable or whether it should be modified will eventually lose interest. There is no reason whatsoever to suppose that the language system of the second language learner deviates, in some interesting or strange way, from other natural languages. There will be a continued interest, however, in the processes of second-language behaviour which canprovide insights into language acquisition and language development. Linguists can make a contribution in this respect by doing research into the linguistic coherence of certain properties of a language rather than by trying to find out whether second language learners have an innate capacity for learning a language. This is precisely why research into parameters can help us gain insight into the development of interlanguage systems.

4.2 *Parameters*

If it is true that certain properties of a language are related, then the question arises whether these relationships play a role in the second language acquisition process. These relationships could offer an

explanation for the fact that certain phenomena are acquired simultaneously and some are acquired before others.

Linguists have introduced the idea of parameters and *parameter setting* to account for such relationships. Parameters are part of the innate language-learning capacity and constitute sets of options in UG (White 1981, 1982, 1985a, 1985b). This is referred to as parametric variation. The setting of a parameter is linked to a cluster of properties in a given language.

Two of the most widely researched parameters are the *Pro-drop* and the *Head*-parameter.

In *pro-drop* languages, such as Spanish and Italian, it is commonly assumed that we are concerned with a cluster of three properties:

Absence of pronominal subjects:

(30a) [*pro*] salieron a las ocho
(30b) * left at eight

(31a) [*pro*] llovió mucho ayer
(31b) * rained a lot yesterday

Free inversion of subjects:

(32a) [*pro*] han llegado mis estudiantes
(32b) * have arrived my students?

Possible *that-trace* constructions:

(33a) Quién$_i$ has dicho [*pro*] que t_i va a venir? (where t_i indicates the position of the trace)
(33b) * Who did you say that is going to come?

White (1985b), Hilles (1986) and Phinney (1987) all carried out research into the acquisition of English (not a *pro-drop* language) by learners whose native language was Spanish (which is a *pro-drop* language). The idea was that the more or less simultaneous acquisition of the various aspects of a given parameter would constitute evidence for the psychological reality of parameter setting. Furthermore, the parameter notion also entails that the acquisition of one of the aspects would trigger the acquisition of the other aspects.

White's research is based on grammaticality judgement experiments with Spanish-speaking learners of English as a second language. The research showed that these subjects reacted differently to the English equivalents of the above constructions. Sentences with subject inversion *(32b) wereinvariably rejected, sentences with *that-trace* constructions *(33b) were usually accepted and sentences with no pronominal subject

*(30b), *(31b) were rejected more and more as the second language level increased.
One could draw either one of the following conclusions from these results:

a. Some of the phenomena investigated do not belong to the parameter (White 1985b)
b. Second language learners need independent evidence for each aspect of the parameter (Liceras 1989, 75)

It is clear that neither of these conclusions provides strong backing for the relevance of parameter notion for second language acquisition. We have to conclude, therefore, with respect to the *pro-drop* parameter, that the parameter notion raises more questions than it answers. One of the first questions is whether certain parameters are well-founded. Would it not be possible to provide an alternative explanation for the same phenomenon, based on the *language learning strategies* people have at their disposal? And secondly, is the status of the concept of parameters perhaps comparable to the status of the notion of transformation? If, in the first instance, a parameter is a theoretical construct, it is not to be expected that direct predictions about processes of language acquisition and language behaviour can be derived from it. In this respect, we only have to think of the experiments, carried out not so long ago, which were aimed at testing the psychological reality of transformations.

As in the days of contrastive analysis, there are two approaches. On the one hand, there are researchers who strive to find evidence for the reality and application of a particular linguistic theory (in this case the notion of parameters) and on the other hand there are those who are of the opinion that it may be necessary to appeal to linguistic notions to provide explanations for the processes of second language acquisition and behaviour. Applied linguists will opt for the latter approach.

If research into second-language behaviour shows that certain phenomena are acquired simultaneously and some are acquired before others, then it is important to find out if the learner's current language system can provide an explanation for this. This is not only important in order to properly understand what is happening but also to realize that there are certain internal regularities in the acquisition of a second-language system which ensure that the acquisition process cannot develop in any other way, more particularly that the acquisition of certain properties of a language is a necessary condition for the acquisition of other properties.

Research carried out by Clahsen et al. (1983) and Clahsen (1985) investigated the German spoken by immigrants with a Romance language as their first language. Three stages can be clearly distinguished in the acquisition process of these second language learners. Initially the verb forms appear in second position as in (34). These sentences have a clear SVO structure as they do in the mother tongue:

(34) ich *habe verstehen* auch nix
I have understood also nothing
'I haven't understood anything either'

ich *sagen* bei mir nis gut (I)
I say (inf.) with me not is good
'I said that it is not fine with me'

Subsequently there are two striking developments. First of all, simultaneously with the acquisition of agreement between the subject and the finite verb, the correct position of the non-finite verb at the end of the sentence is learned. This can be seen in examples like (35). The underlying structure of these sentences is SOV:

(35) ich *habe* funf klass*gemacht* (Carlo I.)
I have five classes made
'I have completed five classes'

will nach hause *gehen* (Carlo I.)
want to house go
'I want to go home'

Then one learns that the finite verb can only be preceded by one constituent, in other words that the finite verb is always in second position. This is referred to as the *Verb-second* phenomenon, and explains inversion, i.e. the fact that the subject is placed after the finite verb whenever there is an adverbial in sentence initial position. For speakers of the Romance languages there seems to be a link between the acquisition of *Verb-second* and the correct position of finite verbs in subordinate clauses: *V-end*. Cf. the positioning of the finite verb in subordinate clauses in Carlo I. (36) without *Verb-second* and Pietro I. and Benito I. (37) with *Verb-second*:

(36) und dann dreizehn jahr *ich hab* arbeit gegang (Carlo I.)
and then thirteen years I have work gone
'And then I went to work for thirteen years'

und dann *ich hab* schluß gemakt (Carlo I.)
and then I have end put
'And then I have put an end to it'

wenn *ich habe* gefund *ich gehe* nicht mit (Carlo I.)
when I have found I go not with
'When I found it I didn't come with them'

(37) hier *komm ich* abend nur drei zwei stunde (Pietro I.)
here come I evening only three two hours
'Here I come in the evening for only three or two hours'

wenn sie ein bißchen größer *sind* (Pietro I.)
when they a little bigger are
'When they will be a little bigger'

jetzt *verstehe ich* da und gebe dene antwort (Benito I.)
now understand I that and give them answer
'Now that I understand it, I will answer them'

da wird dann untersuchen ob eine gesund *ist* (Benito I.)
there will be then examined if one healthy is
'Then she will be examined'

This view on the link between the acquisition of *Verb-second* and the correct positioning of the finite verb in subordinate clauses differs from that in Clahsen et al. (1983). Here it is assumed that *V-end* is acquired after inversion. When the data are scrutinized more closely, however, it appears that certain subjects obtain a very low score on subordinate clauses because they produce a considerable number of subordinate clauses introduced by *weil*. In some German dialects, however, subordinate clauses with *weil* have the same weird order as main clauses. It would, therefore, be rather premature to conclude from these sentences that the subjects have not yet acquired correct word order in subordinate clauses. Evidence to support my opinion that *V-end* and inversion are acquired more or less simultaneously is presented by Ellis (1989, 320f.).

So initially, that is to say, at the same stage at which utterances like (35) occur, sentences like (36) are also still produced. Here there is no evidence for *Verb-second* yet and the subordinates have the same word order as main clauses. Later on in the acquisition process (as in 37) we see that clauses are produced with *Verb-second* and with *V-end* in subordinate clauses.

How can these developmental stages and, more particularly, the relationship between the phenomena discussed be explained? The examples in (34) show that speakers of Romance languages initially use constructions which reflect the structure of their mother tongue.

The second stage is determined by the simultaneous acquisition of agreement rules and the position of the finite and non-finite verb in the main clause. My explanation for the relationship between both phenomena is as follows: to learn the difference between the position of the finite and the non-finite verb, these verb categories must be distinguished from each other. The differences are determined morphologically. When a second language learner knows the agreement rules, he is able to make this distinction and he possesses the knowledge necessary to learn the difference in position as well. This results in a restructuring of the interlanguage system. The non-finite verb is no longer in second position (as in 34) but in end position (as in 35).

In the third stage (as in 37) inversion and the position of the finite verb in the subordinate clause are acquired more or less simultaneously.

The relationship between the position of the finite verb in the main and the subordinate clause is important in this respect. See Fig. 1.

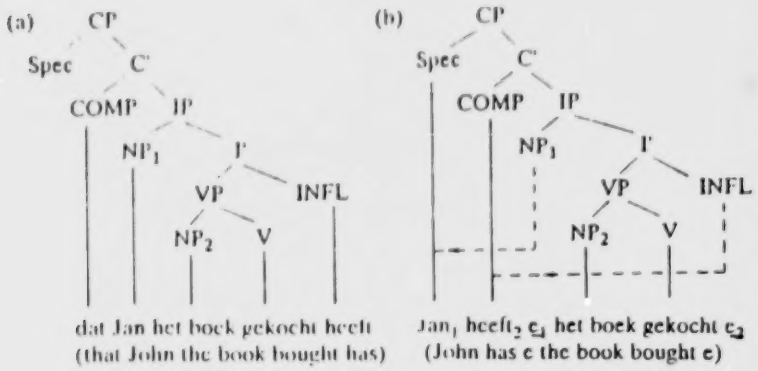

Figure 1: Word order in subordinate and main clauses.

We assume for German and Dutch that the finite verb in main clauses moves into the position which is usual for the complementizer (here the word *dat*) in subordinate clauses. In Fig. 1 this position is marked by COMP. If there is no complementizer, the finite verb can be moved into this position (cf.Fig 1b.); when there is a complementizer, the finite verb is placed at the end of the sentence (cf. Fig 1a). This explains the complementary relationship between main and subordinate clause order. In main clauses the position before the finite verb is taken up by the subject, the direct or indirect object or an adverbial. That is why the finite verb is always in second position in main clauses.

The relationship between the acquisition of inversion and the position of the finite verb in subordinate clauses can now be accounted for. As long as second language learners are still only able to produce simple sentences, they cannot know that the position of the finite verb in main clauses is the position for the complementizer in subordinate clauses. The moment the rules for subordinate clauses are acquired and, consequently, the relevance of COMP for the positioning of the finite verb, second language learners know that the finite verb is placed in second position only when there is *no* complementizer. As a result of the acquisition of the complementary relationship between the position of the complementizer in subordinate clauses and the finite verb in main clauses, the current interlanguage system is re-structured. The finite verb is now in COMP-position in main clauses. The relevance of

'OMP for the position of the finite verb accounts for the fact that nversion in main clauses and the position of the finite verb in ubordinate clauses are acquired more or less simultaneously.

This explanation for the relationship between rules which are elevant to the acquisition of word order implicitly answers the question hy underlying OV or VO order is acquired before *Verb-second*. The nswer is rather sobering. The underlying VO or OV word order can be earned on the basis of main clauses, while for the acquisition of *Verb-econd* it is essential that learners should realize that there is a difference etween main clauses and subordinate clauses. Since subordinate clauses re part of complex sentences, they are more difficult to produce than mple main clause structures (cf. Jordens 1988).

This example shows not only that processes of second language cquisition can be distinguished and divided into various stages, but also nat these stages are characterized by linguistic coherence. This coherence as to do with the fact that some rules have to be mastered before other ules can be acquired. The order of the stages has to do with the structure f the first language and the processing of second-language input. In the nitial stages the input is interpreted in terms of the native language and econd language learners start to process simple main clauses before they rocess more complex structures.

.3 *Conclusion*

econd language data appear to be of little use to linguistic research imed at finding out whether or not second language learners have ccess to innate language knowledge. Second language acquisition esearch, on the other hand, can gain a lot from the data provided by nguistic research, because linguistic relationships have turned out to lay an important role in second language acquisition. They can account or phenomena such as coherence and order of acquisition in second nguage learning. This is not only important in order to gain insight nto processes of language behaviour and language development, but lso with respect to the methodology of second language teaching.

References

Chomsky, N. 1975. *Reflections on language*. New York: Pantheon.

Clahsen, H. 1984. The acquisition of German word order: a test case for cognitive approaches to L2 development. In: R. Anderson (ed.), *Second languages. A cross-linguistic perspective*. Rowley Mass.: Newbury House. 219 - 242.

Clahsen, H. 1988. Critical phases of grammar development. A study of the acquisition of negation in children and adults. In: P. Jordens & J. Lalleman (eds.), *Language development*. Dordrecht: Foris. 123 - 148.

Clahsen, H., J. Meisel & M. Pienemann. 1983. *Deutsch als Zweitsprache*. Der Spracherwerb ausländischer Arbeiter. Tübingen: Narr.

Eckman, F.R. 1977. Markedness and the contrastive analysis hypothesis. *Language Learning* 27, 315 - 330.

Eckman, F.R. 1985. Some theoretical and pedagogical implications of the Markedness Differential Hypothesis. *Studies ins Second Language Acquisition* 7, 289 - 307.

Ellis, R. 1989. Are classroom and naturalistic acquisition the same? A study of the classroom acquisition of German word order rules. *Studies in Second Language Acquisition* 11, 305 - 328.

Felix, S. 1989. UG-generated knowledge in adult second language acquisition. In: S. Flynn & W. O'Neill (eds.), *Linguistic theory in second language acquisition*. Dordrecht: Kluwer. 277 - 295.

Hilles, S. 1986. Interlanguage and the pro-drop parameter. *Second Language Research* 2, 33 - 52.

Jordens, P. 1983. *Das Deutsche Kasussystem im Fremdspracherwerb*.. Eine psycholinguistische und fehleranalytische Untersuchung zum interimsprachlichen Kasusmarkierungssystem niederländisch- und englischsprachiger Deutschstudierender. Tübingen: Narr.

Jordens, P. 1986. Production rules in interlanguage: Evidence from case errors in L2 German. In: E. Kellerman & M. Sharwood Smith (eds.), *Crosslinguistic influence in second language acquisition*. Oxford: Pergamon. 91 - 109.

Jordens, P. & E. Kellerman. 1981. Investigations into the "transfer strategy" in second language learning. In: J.G. Savard & L. Laforge (eds.), *Proceedings of the 5th Congress of l'Association Internationale de Linguistique Appliquée*. Québec: Les Presses de l'Université Laval. 195 - 215.

Kellerman, E. 1978. Giving learners a break: Native language intuitions as a source of predictions about transferability. *Working Papers on Bilingualism* 15, 59 - 92.

Klein, W. 1989. Seven trivia of language acquisition.

Li, C.N. & S.A. Thompson. 1976. Subject and topic: A new typology of language. In: C.N. Li (ed.), *Subject and topic*. New York: Academic Press. 457 - 489.

Liceras, J.M. 1989. Syntax and stylistics: More on the pro-drop parameter. In: J. Pankhurst et al. (eds.), *Learnability and second languages. A book of readings*. Dordrecht: Foris. 71 - 93.

Nickel, G. 1970. PAKS-Arbeitsbericht Nr.5. Stuttgart: Lehrstuhl Anglistik/Linguistik.

Nickel, G. 1970. PAKS-Arbeitsbericht Nr.6. Stuttgart: Lehrstuhl Anglistik/Linguistik.

Phinney, M. 1987. The pro-drop parameter in second language acquisition. In: T. Roeper & E. Williams (eds.), *Parameter Setting*. Dordrecht: Reidel. 221 - 238.

Rohdenburg, G. 1974. *Sekundäre Subjektivierungen des Englischen und Deutschen*. Vergleichende Untersuchungen zur Verb- und Adjektivsyntax. PAKS-Arbeitsbericht Nr.8. Bielefeld: Cornelsen-Verhagen & Klasing.

Rutherford, W.E. 1983. Language typology and language transfer. In: S. Gass & L. Selinker (eds.), *Language transfer in language learning*. Rowley Mass.: Newbury House. 358 - 370.

Schachter, J. & W.E. Rutherford. 1979. Discourse function and language transfer. *Working Papers on Bilingualism* 19, 1 - 12.

White, L. 1981. The responsibility of grammatical theory to acquisitional data. In: N. Hornstein & D. Lightfoot (eds.), *Explanation in linguistics*. The logical problem of language acquisition. London: Longman. 241 - 271.

White, L. 1982. *Grammatical theory and language acquisition*. Dordrecht:Foris.

White, L. 1985a. The acquisition of parameterized grammars. Subjacency in second language acquisition. *Second Language Research* 1, 1 - 17.

White, L. 1985b. The "pro-drop" parameter in adult second language acquisition. *Language Learning* 35, 47 - 62.

White, L. 1989. *Universal Grammar and second language acquisition*. Amsterdam: Benjamins.

Zobl, H. 1980a. The formal and developmental selectivity of L1 influence on L2 acquisition. *Language Learning* 30, 43 - 57.

Zobl, H. 1980b. Developmental and transfer errors: Their common bases and (possibly) differential effects on subsequent learning. *TESOL Quarterly* 14, 469 - 479.